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10/049,271

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Gabriel Daemon Engel

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EXAMINER

VAUGHN, GREGORY J

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/049,271 | Applicant(s) ENGEL ET AL. | |
| | Examiner GREGORY J. VAUGHN | Art Unit 2178 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 13-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 13-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/11/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Application Background

1. This action is responsive to the amendment filed on 5/5/2008.
2. Applicant has amended claims 1, 2, 9, 18, 26 and 27; and added new claims 31-44. Claims 11 and 12 were previously canceled.
3. Claims 1-10 and 13-44 are pending in the case, claims 1, 18 and 31 are independent claims.
4. Acknowledgment is made to the Information Disclosure statement filed 6/11/2008.
5. the rejection of claims 1-10 and 13-22, rejected under 35 USC 103, as described in the office action dated 2/5/2008 is withdrawn as necessitated by the amended claims, however new grounds of rejection are made, as described below.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention."

7. Claims 1-10 and 13-44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
8. **Regarding independent claims 1, 18 and 31**, the amendment filed 5/5/2008 adds the following limitations: "*multi-component display*" (first, second and third limitations). The examiner has reviewed the originally filed specification, and has failed to find support for the added limitations. The originally filed application describes components on page 6, line 21, but this appears to be directed toward logical objects to be displayed. Furthermore, the invention is described as "*multi-level screen display*" (see title and specification starting on page 3, line15). Applicant is required to cancel the new matter in response to this office action.
9. **Regarding claims 9-10, 14-29 and 32-44**, the claims are rejected for fully incorporating the deficiencies of the base claims.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, 2, 4-7, 9, 10, 13-33, 35-38 and 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sadovnik et al., US Patent 5,764,317, filed 6/26/1995, patented 6/9/1998 (hereinafter Sadovnik) in view of Reamey, US Patent 5,113,272, filed 2/12/1990, patented 5/12/1992, and in further view of McGarry, US Patent 6,859,907, filed 8/9/1999, patented 2/22/2005.
12. **Regarding independent claim 1**, Sadovnik discloses a multi-component display with a first display screen and a second display screen, where the display screens have screen designation codes in Figure 4A-4D (screen designation codes 1-4 are shown in the figures). Sadovnik discloses simultaneously displaying objects on the various screens in Accordance with screen designation codes. Sadovnik recites: *"The present invention can advantageously utilize recent advances in liquid crystal development and treats a three-dimensional scene as a set of two-dimensional cross sections, or slices"* (column 3, lines 28-32). Sadovnik discloses a computer

controlled display system. Sadovnik recites: *"An IBM 486 PC can be used as the basic element of volumetric screen controller 80"* (column 7, lines 11-12). The IBM 486 PC is a standard computer. Sadovnik discloses displaying pixel oriented images. Sadovnik recites: *"full-color liquid-crystal matrix-based video projectors that are suitable for use as LCTV 140 have recently become readily commercially available (e.g. for example, the Panasonic PT-10L liquid crystal display where the active matrix consists of 239.times.272 pixels)"* (column 6, line 66, to column 7, line 3).

Sadovnik is directed toward a projector based display system where the multidimensional display screens are electrically switched (turned on or off) in order to achieve the 3-D or volume type effects. Sadovnik fails to disclose simultaneously displaying pixels on two or more screens (see Figures 4A to 4D and column 7, lines 43-62). Reamey discloses a multi-layer display screen where the pixels are displayed simultaneously. Reamey discloses in Figure 4a a seven layer display device where each layer is displaying pixels (i.e. images), where the images are shown at reference signs 50a through 50g. Figure 4b shows the resultant image.

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to combine the 3-D semiconductor display of Reamey with the 3-d volume display of Sadovnik in order to produce: *"a three dimensional display device which can generate real 3D images without the need for special glasses or other visual aids, but which is compact and simple to construct"* (Reamey, column 2, lines 16-19).

Sadovnik and Reamey are directed toward displaying objects to produce three-dimensional real life visualization. Sadovnik and Reamey fail to disclose displaying spreadsheet objects. McGarry is directed toward a machine vision sensor that displays spreadsheet objects. McGarry discloses in Figure 2 combining objects in order to simultaneously display the objects at the same time.

Therefore, it would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to combine the multi-layer display as taught by Sadovnik and Reamey with combining spreadsheet objects, as taught by McGarry, in order: *“to meet the practical requirements of machine vision processing, while still retaining the fundamental characteristics and ease-of-use of a conventional electronic spreadsheet”* (McGarry, column 2, lines 34-37).

13. **Regarding dependent claim 2**, McGarry discloses a conventional electronic spreadsheet, as described above. McGarry discloses a spreadsheet cell in Figure 3 at reference sign 33.
14. **Regarding dependent claim 4**, McGarry discloses a spreadsheet object with a formula that is dependent upon another spreadsheet object in Figure 4 at reference sign 42.
15. **Regarding dependent claims 5 and 6**, McGarry discloses spreadsheets. McGarry recites: *“The superior ease-of-use characteristics of electronic spreadsheets are well known”* (column 1, lines 23-24). Word wrapping and multiple colors of spreadsheet objects is well known.

16. **Regarding dependent claim 7**, McGarry discloses a formula that is dependent upon other cells, as described above. This formula links the cells.
17. **Regarding dependent claim 9**, Sadovnik discloses the objects moving in respect to one another in Figures 4A -4D.
18. **Regarding dependent claim 10**, McGarry discloses an active spreadsheet, as described above.
19. **Regarding independent claim 13**, Sadovnik discloses the use of two or more screens in a multi-layer display where one display screen is positioned in front of the other. Sadovnik recites: *"another object of the invention is to provide a volumetric multi-layer screen that has one or more of the characteristics discussed above but which is relatively simple to manufacture and assemble"* (column 4, lines 28-31). See also Sadovnik's Figure 4A in which the multi-layer display is shown with 4 screens.
20. **Regarding dependent claim 14**, Sadovnik discloses modifying the transparency of the front screens to enhance the visibility of the back screens. Sadovnik recites: *"It is the optical properties of the PDLC that are electrically switchable. Specifically the PDLC film acts as a diffuser when no voltage is applied. Further, under voltage, the film becomes fully transparent. The screen is rapidly switchable from a diffusing (scattering) state to a transparent state"* (column 7, lines 43-48).

21. **Regarding dependent claim 15**, McGarry discloses overlapping spreadsheet objects in Figure 2.
22. **Regarding dependent claims 16 and 17**, McGarry discloses spreadsheet objects with formulas, where the formulas are dependent upon information in other cells, as described above. It is well known in spreadsheet applications that modifying the dependent information will cause an update or modification to the related objects.
23. **Regarding claims 18-22**, the claims are directed to a computer-usable medium for the method of claims 1, 4 and 5-7, respectively, and are rejected using the same rationale.
24. **Regarding dependent claim 23**, McGarry discloses overlapping spreadsheets as described above. McGarry discloses the overlapping objects are related in Figures 4-6.
25. **Regarding dependent claim 24**, Sadovnik discloses a three dimensional object – see the abstract.
26. **Regarding dependent claim 25**, McGarry discloses two objects associated with a single cell in Figure 3, at reference sign 33.
27. **Regarding dependent claims 31-33, 35-38 and 40-44**, the claims are directed toward a device for the method of claims 1, 2, 4-7 and 9-15, respectively, and are rejected using the same rationale.

28. Claim 3, 8, 34 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sadovnik, Reamey and McGarry, in further view of Courter et al. Microsoft Office 2000 Professional Edition, 1999 (hereinafter Courter).
29. **Regarding dependent claims 3, 8, 34 and 39**, Sadovnik, Reamey and McGarry disclose visual effects in the manipulation of data, with screen designations of groups of data and simultaneous data display on a multi-layer display as described above. Sadovnik, Reamey and McGarry fail to disclose the use of tabs corresponding to the groups of data (claims 3 and 34) or the use of error messages (claims 8 and 39). Courter teaches the use of tabs for groups of data. Courter discloses in Figure 22.1 on page 543 a spreadsheet using tabs to group the data (shown as “*Sheet tabs*”). Courter teaches the use of error messages on page 685 in table 27.1 titled “*Error Codes*”

Therefore, it would have been obvious, to one of ordinary skill in the art at the time the invention was made, to use tabs, as taught by Courter, to manage Sadovnik, Reamey and McGarry’s groups of data in order to “*enter and format spreadsheets, create formulas, design charts, and manage and analyze data*” (Courter, page xxxi, fourth paragraph).

Response to Arguments

30. Applicant's arguments with respect to claims -10 and 13-30 have been considered but are moot in view of the new ground(s) of rejection, as described above

Conclusion

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Vaughn whose telephone number is (571)

Art Unit: 2178

272-4131. The examiner can normally be reached Monday to Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen S. Hong can be reached at (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Stephen S. Hong/
Supervisory Patent Examiner, Art
Unit 2178

/Gregory J. Vaughn/
Patent Examiner
July 28, 2008